STATE OF MISSOURI

Bob Holden Governor Stephen M Mahfood Director

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF ENVIRONMENTAL QUALITY

P O Box 176 Jefferson City MO 65102 0176

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Mr Bruce Morrison
U S Environmental Protection Agency
901 N 5th St
Kansas City, KS 66101

Dear Mr Morrison

The Missouri Department of Natural Resources has reviewed The Doe Run Company's Smelter Transportation and Materials Handling Plan In general, the redraft of the plan comes closer to controlling releases from transportation and material handling than the original draft However, many of our original comments were not addressed Again, the plan does not provide sufficient detail, especially in terms of performance standards, to assess whether releases are not occurring through Doe Run's material handling and transport processes and whether the corrective actions are effective The plan appears to be well organized in terms of a systematic treatment of off-site and on-site material transportation and handling processes However, the plan could benefit from the inclusion of diagrams and flow charts of material handling

The concept of a main, fully enclosed, heated truck wash that you have proposed would be a good solution to prevent the tracking of dust through town, and is one we would support Some of our comments on the details of this document would need to be altered to address the change in plan

In our March 21, 2002, meeting, Doe Run requested that we de-couple this plan from procedures needed at their mills to address transportation I stated that we could do that, if we had some assurance that truck washing was occurring at the mills Our observation of the concentrate trucks is that they are coated with dust coming into town This document should contain some commitment to immediately implement interim measures to wash trucks as they leave the mills, and a statement that a final plan shall be submitted within six months It may be that the most appropriate location for the heated, enclosed truck wash is at the mill

There are some transportation and material handling processes not addressed in the plan These include, but may not be limited to, the residential yard soil removal actions, the employee parking lots and personal vehicles entering and exiting the facility, and city of Herculaneum, other utilities, railroad, and other traffic requiring access to their facilities through the Doe Run facility These issues should be discussed in the plan

The plan makes many references to lead contaminants, lead-bearing materials, etc It should be clarified throughout the plan that the plan applies to all hazardous substances and other materials, products, and wastes transported to, from, and within the facility, and include measures to prevent releases of other hazardous substances in addition to lead materials

The following are the department's specific comments on the subject document

1 Section 2 0, Introduction, page 4, various zones of concern and control are established (red

green, blue) Doe Run should include a street dust sampling program that establishes that the designation of these zones is appropriate The sampling should be ongoing

2 Section 3 0, Truck Transportation Plan, Doe Run needs to provide confirmation that the transportation and handling plan is resulting in reduced fugitive emissions into the streets of Herculaneum It does not describe the street cleaning activities or any sampling and analyses needed to demonstrate the effectiveness of street cleaning Road sampling and/or wipe samples of trucks should be conducted to ensure that recontamination by trucks is not occurring

3 Section 3 1, Plant, page 5, Doe Run should commit to a single haul route that minimizes contact with residential property, pending city approval The most logical route would be the current main haul route All other haul routes must be abandoned A buffer zone should be established along the haul route in the buyout zone to protect remaining residents

4 Section 3 1 1 1, Lead Concentrate, does not address procedures for concentrate truck unloading and washing

5 Section 3 1 1 1, Lead Concentrate and Lead-Bearing Materials, page 5, the problem with depending on tarping is that it is too susceptible to human error Because contractors conduct all of the truck transport, the department has little confidence that long-term, 100% compliance of tarp covering will occur There needs to be a program implemented, and monitored by Doe Run personnel, that contains a 100% guarantee that all trucks are tarped entering and leaving the facility The plan should describe how Doe Run intends to ensure that tarping requirements will be followed Either some type of lock-in program on the tarps or a gate operated by Doe Run employees that requires a closed tarp before it is opened should be implemented The contractual language that requires controls should be added to the appendices If Doe Run cannot provide a program that ensures 100% compliance with tarping requirements into the future, then sealed trucks must be used

6 Section 3 1 1 1, Lead Concentrate, are the currently used open-top trailers constructed or otherwise sealed such that fine or siftable concentrate is prevented from being released through cracks or joints in the bottom of the trailers?

7 Section 3 1 1 1, Lead Concentrate and Lead-Bearing Materials, page 5, the percentage of concentrate that is expected to be transported by truck and rail should be identified The department expects that at least 80% of the concentrate shall be transported by rail The exceptional conditions under which concentrate shall be hauled by truck should be identified

8 Section 3 1 1 1, Lead Concentrate and Lead-Bearing Materials, the plan should state measures implemented by Doe Run at its mine/mill sites and the Herculaneum facility to assure that truck transport personnel do not return to their homes or home bases with loads of concentrate in storage overnight or longer All shipments of concentrate placed in transit at the mills must be delivered within the same operating day

9 Section 3 1 1 1, on page 6 under Lead-Bearing Materials, it is indicated that the strip mill dock is not in the red zone This area and the entire road between the intersection of Main and Station Streets, the entire length of the former south Station Street past the railroad tracks and continuing on the road around the south and east sides of the facility must be in the red zone, unless a sampling program indicates otherwise Based on DNR's field observations, it

appears likely that concentrate may remain adherent to concentrate trucks after unloading in the unloading station and available for release as the trucks return to the scale house and/or depart the facility It also appears likely that concentrate may accumulate on surfaces in the unloading station where it may come in contact with the vehicle tires and be tracked out of the unloading station Residual concentrate deposited on the road may then be entrained in airborne dust or be tracked into the community and onto the east road in the facility Also, trucks and railcars used to transport slag cross this road in delivering slag to the slag disposal/storage area and returning to the facility DNR field personnel have reported observing slag on the road in these areas that may contribute to contamination in road dust and become entrained in airborne dust and/or tracked further into the facility along the east road or into the community

10 Section 3 1 1 1, the last sentence of page 6 should include, "causing contaminated dust that may become airborne", in addition to tracking of lead contaminants from the plant

11 All of the subsections in section 3 1 1 2 addressing each non-lead-bearing material should specify the locations of facility entrance, exit, unload, and wash

12 Section 3 1 1 2, regarding the Fuel Oil subsection, the plan text and figures do not describe or show the location of Doe Run's fuel oil storage facilities where incoming shipments are unloaded

13 Section 3 1 1 2, regarding the Fluxes and Substitutes subsection, it is indicated delivery trucks do not leave the green zone in unloading these materials Because of the possible presence of concentrate and slag on the road south of the concentrate unloading station and the east road, and the potential for this material to be tracked into the facility and out into the community and/or become entrained in airborne dust, these roads should be considered red zone unless sampling indicates otherwise

14 Section 3 1 2, all subsections addressing specific outbound materials must specify the entrance, exit, loading, and wash locations for vehicles transporting these materials

15 Section 3 1 2 1, page 8, we believe the areas for truck loading of lead products must be in the red zone unless sampling indicates otherwise, and product trucks must be washed before departing the facility, because they travel over roads that may be contaminated with lead from transport, loading, and/or unloading of concentrate and slag, as discussed previously

16 Section 3 1 2 2, again, for reasons specified above, the silver product transport vehicles must be considered to originate in the red zone unless sampling indicates otherwise, and wash before departing the facility

17 Section 3 1 2 3, the text and/or figures should show the locations of storage for hazardous, special, and biological wastes specified in the plan

18 Section 3 1 3, the roads south of the intersection of Station and Main Streets extending south to the railroad tracks and the east road should be in the red zone unless sampling indicates otherwise, for reasons explained in more detail above All the roads shown in the green zone should be in the red zone, and all vehicles passing over these roads must be washed before departing the facility It would be preferable if traffic from all three entrance/exits designated in the plan would be funneled through a single entrance/exit and a vehicle wash facility be

placed near the intersection of Station and Main to serve all vehicles departing the facility directly onto the dedicated haul route, and the roads vacated by the city of Herculaneum and closed to public access If the three access points and wash stations are maintained, more detail is needed regarding access restrictions and vehicle washing facilities This section does not address contaminants available for vehicle tracking and entrainment in airborne dust from production processes as opposed to material handling and transportation sources

19 Section 3 1 3 2, South Storage Area Entrance, page 10, the plan does not describe the conditions under which the permanent truck wash station is used Do all vehicles have to pass through this truck wash 100% of the time? Also, an inspection program should be implemented to ensure that the truck wash has high enough water pressure to remove dust

20 Section 3 1 3 3, page 10, the green zone road should be specified red zone unless sampling indicates otherwise, as discussed above

21 Section 3 1 3 4, Concentrate Truck Unloading Station, page 10, states that the truck unloading facility eliminates potential tracking issues The department has observed concentrate buildup on the grizzly and other areas that do present potential tracking sources This facility should be treated as a red zone

22 Section 3 1 3 4, Concentrate Truck Unloading Station, page 11, the plan does not provide enough detail describing specific procedures for truck cleaning after unloading, or how any releases of concentrate in the unloading area will be addressed The sides of the concentrate trucks, undercarriage, and wheel wells need to be washed, as well as the tailgate and mud flaps It does not contain specific procedures for cleaning spillage of concentrate in the unloading area or on streets outside the unloading area that could be tracked into the community by departing trucks

23 Section 3 1 3 5, Road Surfacing, page 11, sampling conducted by EPA indicates that road dust concentrations continue to be elevated significantly above non-haul road samples Road cleaning efforts, while effective at initially reducing extremely elevated concentrations, have not been effective at maintaining the roads at acceptable concentrations Re-paving the roads is a necessary step to cap highly contaminated roads This should be included in the plan for both haul routes that have historically been used Road paving can be implemented after SIP controls and other transportation and handling measures have been implemented Periodic road dust sampling and analyses must be conducted at various points along the haul route in the community and in the facility as a performance measure for the plan Modifications of the plan may be based on this and other sampling and analyses that may be included in the plan

24 Section 3 1 4 1 and 3 1 4 2, pages 11 and 12, for the reasons outlined above, sampling is needed in order to designate the appropriate status of this section of road Otherwise, the entire east road should be in the red zone

25 Section 3 1 4 3, page 12 If Doe Run constructs a central entrance/exit and accompanying vehicle wash station near the intersection of Main and Station Streets, then the most logical haul route would be the current main haul route, which ultimately would appear to be the most efficient route through the buyout zone One dedicated haul route must be designated and all others abandoned

26 Section 3 1 4 3, Potential Alternate Truck Route, if the Old Joachim Railroad Bed Bypass is constructed, the central entrance/exit and vehicle wash station would have to be relocated to accommodate this route

27 Section 3 1 4 4, Automated Truck Wash, page 13, a main, centrally-located, enclosed, and heated truck wash that handles all egress from the facility is probably the best option for preventing tracking contamination from leaving the facility on vehicles Installation of this facility would solve many of the difficulties encountered due to cold weather, complex traffic patterns within the facility and the need for multiple wash facilities Design specifications for the vehicle wash, as well as plans for containing and treating wash water must be provided The wash facility must provide a thorough three-dimensional wash for all vehicle components, including tailgates, mudflaps, tires, wheels, sides, undercarriages, and any other components that may come in contact with hazardous substances A decision on the designated haul route and location of facility entrance/exit and wash station should be made immediately

28 Section 3 1 5 3, Vehicle Decontamination, page 14, decontamination needs to include the sides of the bed and cab, mud flaps and entire back end, as well as the tires and undercarriage

29 Section 3 1 5 4, Vehicle Decontamination in Freezing Conditions, page 15, as noted above, a heated, enclosed truck wash should be installed to provide decontamination in the winter months Section 3 1 5 5, page 15 Doe Run should maintain a log of all inspections completed

30 Section 3 1 5 7, page 15, should include more specific information about the routes inside the plant to be cleaned, and the schedule for cleaning, which will maximize the effectiveness of internal road cleaning

31 Section 3 1 5 or other appropriate sections of the plan should address continued cleaning of the dedicated haul route through the community until the other control measures in the plan have been implemented, and proven effective by sampling and analyses Possible contributions to road contamination by facility process emissions should be taken into consideration

32 Section 3 1 5 7, Cleaning of Internal Roads, the first sentence on the top of page 16 states the movement of slag handling equipment, which crosses the road at the railroad crossing at the south end of the plant, is indicative of the need for this road to be in the red zone unless sampling and analyses indicate otherwise Field observations by DNR personnel frequently indicate the presence of slag on the road in the area of the railroad tracks

33 Section 3 1 5 10, page 16 All modifications to the plan must be subject to agency review and approval

34 Section 3 2, Mines – Outbound Lead Concentrate, page 16, decontamination of trucks outbound from the mines/mills is vital to the success of the program in Herculaneum The current plan should commit to truck washing in some fashion upon leaving those facilities, effective immediately, prior to submittal of the final plan for the mines In addition, a date by which the agencies can expect a written plan should be stated in this plan

35 Section 3 3 1 1, Bulk Trailers for Lead-Bearing Materials, page 17, as mentioned above, a mechanism that guarantees tarps are closed and tightly fitted when leaving the mines and the smelter should be implemented Some type of lock-in and lock-out mechanism similar to a safety program could be implemented A gate operated by a Doe Run employee could also provide this guarantee A central truck wash would be conducive for operating a program that leads to inspection of each truck leaving the facility to ensure that tarps are in place

36 Sections 3 3 1 2, page 17, and 3 3 2 4 , page 18 Doe Run should develop a detailed plan for response to concentrate spills during transit, including verification sampling and analyses, and reporting requirements The plan may be implemented by the transportation contractor, but all cleanups should be overseen and certified by Doe Run

37 Section 3 3 2 1, Dry Street Sweeping, page 17, street sweeping needs to be on a set schedule or be conducted on a minimum frequency At a minimum, the entire extent of the designated haul route must be swept at least until other measures in the plan are implemented and proven effective at preventing contamination of road dust

38 Section 4 0, Railroad Transportation Plan, generally does not contain sufficient detail on procedures for management of materials transported by railcar so as to minimize releases, and decontamination of railcars after delivery or prior to off-site shipment The Railroad Transportation Plan should contain procedures and level of detail commensurate with the Truck Transportation Plan

39 Section 4 0, the Railroad Transportation Plan should specify the rail route(s) to be used for concentrate delivery, and should include plans for response to concentrate spills during rail transit

40 Section 4 1, Rail Inbound, this section does not address the extent to which concentrates will be removed from railcars, and the fate of residual concentrates remaining in railcars after unloading

41 Section 4 1, the Rail Inbound section does not contain response plans for releases of concentrates in transit from derailments, equipment malfunctions, or other causes The plan should specify which rail route(s) would be used for concentrate transportation

42 Section 4 1 1, Lead Concentrate, page 19, how many tons of concentrate are shipped in 40 rail cars per week? What percentage of total concentrate delivery does this represent?

43 Section 4 5, Best Management Practices, the railroad tracks into and out of all facilities, including the slag pile, Glover, and Herculaneum Smelter facilities need to be inspected for visible concentrate and/or slag and cleaned, if necessary

44 Section 4 5 1, Rail Car Unloader, page 20, signs of visible spillage should be cleaned, not just reported to a supervisor Procedures for cleaning should also be outlined here

45 Sections 4 5 1, 4 5 2, and 4 5 3 should contain more specific information regarding release prevention and cleanup, and decontamination of concentrate railcars after unloading and prior to exiting the facility More detail regarding cleaning areas around the tracks should be included

46 Section 5 0, Barge Transportation Plan, the plan should describe handling procedures, procedures for preventing spills, response plans for spills, or inspection and documentation requirements for sulfuric acid

47 Section 6 1 2, Proposed Structural Controls, page 25, it is our understanding that doors on the unloader structure are part of the AOC and SIP requirements As such, they should be installed unconditionally

48 Section 6 6 2, Proposed Structural Controls, the measures described in the department's comments on the Interim Slag Pile Control Plan should be implemented

49 Section 6 6 3, Best Management Practices, page 32, the slag pile seems to be creeping northward along the railroad tracks This material should be cleaned off and slag should be maintained within its prescribed boundaries outlined by the Metallic Minerals Management permit until the final control plan is approved

50 Section 6 6 3, Best Management Practices, page 32, the plan does not describe in adequate detail the washing of trucks moving slag to the storage area, and street sweeping said to occur at the same time The plan does not address possible tracking of contamination from the slag pile by empty trucks returning to the plant The plan does not address truck and/or street sampling and analyses to demonstrate the effectiveness of slag moving procedures from preventing releases from trucks leaving contaminated areas of the plant, or tracking contamination out of the slag pile area Apparently, there is no procedure for washing empty trucks returning from the slag pile Inspection and record keeping procedures similar to that for product transport are not specified

As you know, the plan is intended to satisfy part of the requirements of our settlement agreement of the state's September 25, 2001, Order to Abate and Cease and Desist Violations As such, it is vitally important to the department that our concerns and comments are fully and completely addressed

I can be reached at (573) 751-1288 if you have any questions concerning this matter

Sincerely,

Robert C Hudson

for David E Mosby, RG
Project Manager

DEM lw

c Tony Petruska, EPA